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NUCLEAR REGULATORY COMMISSION

[Docket No. 040-06264 (Terminated); NRC-2012-0077]

Acceptance Decision for the Unrestricted Use of the Former Michigan Chemical Company – Breckenridge Disposal Site

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of acceptability.

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SUPPLEMENTARY INFORMATION:

The U.S. Nuclear Regulatory Commission (NRC) is noticing the acceptability for unrestricted use of the Former Michigan Chemical Company (MCC), Breckenridge Disposal Site (BDS) (also known as NWI Breckenridge) near Breckenridge, Michigan. This site operated under the authority of U.S. Atomic Energy Commission (AEC) license number SMB-00833, which was terminated in 1971.

I. Introduction

The MCC, a subsidiary of Velsicol Corporation, operated a rare-earth metals processing plant from 1967 through 1970 in St. Louis, Michigan. The plant manufactured an array of chemical products; the products manufactured were fire retardant materials, insecticides, animal food supplements, and rare earth oxides.

The manufacture of rare-earth oxides at the St. Louis plant generated a dense, clay-like waste known as “filter cake,” which contained elevated levels of uranium and thorium, two naturally-occurring radioactive materials. The radioactive filter cake was buried at the BDS.

Burial of the filter cake at the BDS was permitted under AEC license number SMB-00833 and regulations in effect at the time. After the filter cake was buried, the AEC terminated the license in 1971, concluding that the BDS was suitable for unrestricted use.

Several years after the license was terminated, residual radioactive contamination above NRC limits was found at the BDS. The NRC contacted the site owner to determine how it planned to remediate the problem.

On April 14, 1999, the NRC issued a letter to NWI Land Management (NWI), then-owner of the BDS, directing NWI to clean up the site under the regulatory framework of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20, Subpart E, “Radiological Criteria for License Termination.” Action on the NRC’s request was delayed when NWI and its parent company, Fruit of the Loom, declared bankruptcy in 1999; a bankruptcy settlement was reached between the United States government and Fruit of the Loom in 2002.

As part of the bankruptcy settlement, Fruit of the Loom and NWI gave title to the BDS to a Custodial Trust, which was established to remediate the BDS using the framework set forth in 10 CFR Part 20, Subpart E. Under the terms of the settlement, the Custodial Trust was not subject to NRC licensing or enforcement authority, but would consult with NRC in its development and application of a remediation plan for the BDS. The NRC’s role in the

remediation has been to provide technical assistance to the Custodial Trust and independent verification of site remediation.

II. Summary

The Custodial Trust hired a contractor to complete remediation of the BDS. Through its contractor, the Custodial Trust completed remediation and final status surveys (FSS) of the BDS in September 2011, and in October 2011, submitted a final status survey report (FSSR) to the NRC for its review and approval.

Prior to receiving the FSSR, the NRC had conducted 25 inspections of the contractor's decommissioning activities between May 2010 and September 2011. Specifically, the NRC inspections were performed to ensure compliance with the contractor's NRC-approved remedial work plans (RWP) and NRC safety regulations. The inspectors also performed independent confirmatory radiological surveys of site survey units as defined in the contractor's RWP (ML110590136) and FSS plans (ML11279A019).

On January 3, 2012, the NRC completed its review of the contractor's final status survey report (FSSR) for the BDS, which is available for public review in the NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML12004A051. The NRC staff's review confirmed that the FSSR was adequate to demonstrate compliance with the radiological criteria for unrestricted use per 10 CFR Part 20 Appendix E for the BDS. The FSS results demonstrated that each survey unit met the radiological criteria for unrestricted use. Radiological surveys and soil sampling data were consistent with the data quality objectives as described in the FSSR, work plans, and the NRC's NUREG-1757, "Consolidated Decommissioning Guidance – Characterization, Survey, and Determination of Radiological Criteria," and NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)."

Residual radioactivity at the BDS is below the regulatory dose limit to an average member of a critical group and does not exceed 25 mrem per year as specified in 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use;" there is reasonable assurance that the health and safety of the public will not be endangered by the unrestricted use of the BDS.

III. Conclusion

Based on the NRC's 25 onsite inspections, the NRC's independent and confirmatory surveys, and the NRC staff's review of the FSSR for the BDS, the NRC concluded that the BDS radiological status was consistent with the provisions of 10 CFR Part 20, "Standards for Protection against Radiation," 10 CFR 20.1402, "Radiological Criteria for Unrestricted Use;" therefore, the site can be released for unrestricted use. The NRC involvement with this site is now considered ended, and no further actions regarding this project are planned unless new information is identified that would alter the NRC's conclusion. The NRC staff documented its review of the remediation activities, FSSs, and the FSSR in a Safety Evaluation Report (SER) (ML12052A066).

IV. Further Information

Documents related to this action, including the FSSR, NRC Inspection Reports, SER and supporting documentation, are available online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access ADAMS, which provides text and image files of the NRC's public documents. The ADAMS accession numbers for the documents related to this notice are listed as an attachment at the end of the SER (ML12052A066). If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to pdr.resource@nrc.gov

These documents may also be viewed electronically on the public computers located at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at Lisle, Illinois this 20 day of March, 2012.

For the Nuclear Regulatory Commission.

/RA/

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